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Management Advice for Family Farms in West Africa:

Role of Producers' Organizations in the Delivery of

Sustainable Agricultural Extension Services

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Abstract. The emergence of Management Advice for Family Farms in West Africa is closely related to the increased integration of farmers into an open market economy. This is creating a strong demand from farmers for advisory support services, focussing on management of the farm. These should go beyond the technical aspects of farming and include the organisational, economic financial and technical implications of farm management. With the gradual withdrawal of Government from extension services delivery, a stimulating context exists for reviewing approaches and systems of support delivery facilities for producers. In response to these developments, several experiments based on these concepts are going on in West Africa. Beyond the variety of objectives and implementation procedures analysed in this paper, common features and a considerable degree of consensus on concepts emerge. Strengthening the producers' capacity for assessment, decision making and management of their farms is a common objective. Differences exist between procedures for delivery of advice, methods and tools used, emphasis put on different aspects of management. All experiments stress the importance of training, enhancing group dynamics and individual learning. They are all farmer and farm family targeted. Expression of farmers' objectives, needs and demands is essential. Advice is based on data gathering and assessment by the farmers themselves. Group dynamics is an important element in formulation of advice. Extension workers become advisors and facilitators. In all cases, Farmers' Organisations are involved in governing delivery services, though at different degrees. In several cases priority is given towards strengthening farmers' capacity in the management of delivery at both local and global levels. Significant improvements in farm performance have been reported. However, to reach sustainability for farmers' driven and governed advice delivery services, innovative agricultural policies and public finance are needed.

Management Advice for Family Farms (MAFF)

The central role of family farms

The agricultural environment is evolving rapidly. Farms are increasingly linked to the market and are selling a greater proportion of their production of export crops and, increasingly, food crops and animal production for supplying a rapid growing urban population. Structural re-adjustment plans have resulted in the removal of stabilisation mechanisms (price support,

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subsidies, etc.) and the progressive withdrawal of government intervention from numerous support activities. New stakeholders (farmers' organisations, NGO's, private companies) are emerging and their participation in the delivery of extension services is getting reinforced. (Schwartz, 1994). But this new context also implies increased economic risks for farmers, and accelerates differentiation between farm households and between regions. New opportunities are created through the comparative advantages that could be beneficial for certain categories of stakeholders. There is need for new information and training facilities for farmers to enable them to improve their management capacity, taking into account the technical, organisational, economic and financial aspects of family farming. The diversity of situations and hence of types of producers, asks for new approaches in delivery of extension, using appropriate tools.

Changing support needs, diversity of approaches in MAFF

For almost a decade, questions have raised within the agricultural extension sector as to how to respond to new demands from farmers, while public resources for extension are shrinking. Different stakeholders have taken various initiatives for delivering support and advice services to farmers. For over ten years, the French Co-operation is supporting approaches that we refer to here as 'Management Advice for Family Farms (MAFF)[2]. The first experiences originated from 'Research and Development' projects (Faure et al., 1998) while some more recent experiences are based on approaches conducted by 'farm management centres' in France, with support from French professional organisations (Inter-Réseaux,1996). Some operations have been in existence since many years, going beyond the experimental stage, are sustainable and concern a significant number of farmers. Therefor lessons could be learnt from them based on evaluation studies.

A workshop intended to share experiences in management advice for family farms (MAFF) was held in Bohicon, Benin, in November 2001. The workshop organizers, together with the French Co-operation, identified ten cases to be studied. These represented different situations in terms of major farming systems concerned (cotton and cereals, purely rain-fed cereals, irrigated rice, market gardening). Before the workshop, each team involved analysed its own case with the help of an analytical framework elaborated by CIRAD. An initial analysis of the ten documents provided a good picture of different aspects concerned: methods and tools used, institutional arrangements, funding mechanisms and performance achieved by the farmers. During five days, the workshop gathered 45 participants including farmers' representatives, extension advisors and researchers, all of them involved in one of the experiments. This differentiated audience provided different points of view and prompted in-depth debates especially when the interests of the farmers' representatives and technicians proved to be opposite. During five workshop sessions each experiment was analysed by the participants, focusing on methods and tools, innovative practises, access to inputs and credit, the role of advisors, funding mechanisms and partnerships. At the end of each session the facilitator and the reporters drew up conclusions, which were discussed with the participants. The case studies, their comparative analysis, and the main conclusions of the workshop debates are presented in the workshop proceedings (CIRAD, IRAM, Inter-Réseaux, forthcoming). The present paper is based on these materials.

[2] Family farming is a form of production characterised by the special link established between economic activities and the family structure. This relationship affects the decision-making process, that is to say, the choice of activities, the organisation of family or paid labour and the management of the family resources. This type of farming accounts for the greater part of world agricultural production. In Africa, family farms are often complex in structure and functioning. This complexity must be specified in each case (farms based on the extended family or the nuclear family, the geography of production units, consumption and accumulation, etc.), Gastellu et al., 1997.

Table 1 shows the variability between the different case studies in terms of themes addressed, tools and methods used, profile of advisors and type of governance. Beyond diversity, there are many similarities (box 1).

Box 1: Principles of Management Advice for Family Farms: 10 Case Studies Analysed at the Bohicon Workshop (Benin), 2001

1. MAFF is a global approach that enables the farmer and his family to analyse their own situation, to look ahead, to make choices, to monitor their activities and to evaluate the results. It takes into account the technical, economic and social aspects of their activities.
2. MAFF is a capacity-building process for men and women engaged in farm management. It helps them to master its different facets: agricultural production and other income generation activities, organisation of labour, management of cash flows, etc. The ultimate goal is to better serve the attainment of various family objectives, of different order. It places the farmer and his family in the centre of the advice function.
3. MAFF is based on a learning process *including training, exchange of experience, mobilisation of farmers' know-how*. It provides tools for improved *decision making, including technical and economic monitoring of production, calculation of gross margins, cash flow management, etc.*; hence making use of observations and measurements, which assumes farmers' ability in calculation and writing.
4. MAFF operations are set within the social network: participants and their groups are part of networks for exchange on practises and local knowledge; they are members of farmers' organisations (FO's) and often among their leadership.
5. MAFF operations are aimed at developing farmers' driven delivery services, with strong participation of FO's or even governed by them; this often implicates partnerships with other actors, NGO's or consultancy firms, which could help them to become more independent from other actors like traders and banks.

Table 1. Main characteristics of 10 operations using Management Advice for Family Farms (Source: CIRAD, IRAM, Inter-Réseaux, forthcoming)

	Mali	**Burkina**	**Burkina**	**Burkina**	**Côte d'Ivoire**	**Côte d'Ivoire**	**Cameroon**	**Cameroon**	**Benin**	**Benin**
	cps/urdoc	**uppm**	**fngn**	**unpc/sofitex**	**scgean**	**aprocasude**	**dpgt/prasac**	**aprostoc**	**cagea**	**cadg**
Start of MAFF (year)	1997	1998	1996	2000	1997	1997	1998	1998	1995	1995
Literacy rate of rural pop.	20%	40-45%	25%	29%	30%	65%	30%	25%	33%	30%
Centre of interest										
Economic	XX	XX	XX	XX	XX	XX	X		XX	XX
Technical	XX	X	X	XX			XX	XX		X
Other					Loans	Fiscal			Land	
Tools and methods										
Diagnostics / inventory	X	X		X	X		XX		X	
Monitoring / analysis	XX	XX	XX	XX	XX	XX	X		XX	XX
Farm planning	X	XX	XX	X	XX	XX	X		XX	XX
Exchange between farmers	XX			XX			XX	XX	X	X
Technical experiments	XX		X				XX	XX		
Use of computers		X	X		X	X			X	X
Individual advice	X	XX	XX	X	XX	XX	X		XX	XX
Group advice	XX	X	X	XX	Planned	Planned	XX	XX	X	X
Advisors										
Number of advisors	5	4	9	10	1	1	14	10	18	12
Number of farmers	350	180	160	150	40	50	400	4500	360	600
Number of farmers per advisor (planned)	120	90	40	150	40	40	200	500	40	50
Farmer-trainers (part-time)	Yes	No	Yes	No	Planned	No	yes	yes	Sponsoring	Sponsoring
Management of the system	FO service centre	FO	FO	FO/ cotton company	specific FO	FO	project	FO	Private service	Private service

Procedure for building up farmers' capacities

Management as a domain for learning and decision-making

The MAFF procedure is aimed at strengthening farmers' ability to master their farming system and at making them less dependent from their environment. The main stakeholder, the farmer, is placed in the centre of the system. The method is based on the management concept, using[3]:

- assessment to understand how farmers and advisors perceive and represent their problems,
- tools to help in decision-making, to increase knowledge and generate learning processes.

In this respect, management advice is perceived as a process consisting of different phases: assessment, planning, monitoring, adjustment and evaluation. In no way it is similar of accountancy or could be reduced to a set of technical and economic assessment tools. It is not an improved version of the transfer of technology approach (Benor, 1984). However, in practice, only a limited amount of effort and time is spend on planning, whereas much time is devoted on assessment and monitoring. Sometimes tools are used that are unwieldy, like exhaustive records of farm structural elements, of crop monitoring data, income and expenditure data, etc. In most cases farm records keeping can be limited to essential characteristics and performance rates, instead of loosing the cap by too much detail.
The advisor is a key person in the process, since his role is no longer to draw up assessments and propose solutions just by himself. He is no longer there for directing all (Hatchuel, 2001) but rather to promote group dynamics and collaborative learning. He has become a facilitator, a person who helps to formulate problems and to identify possible solutions. Van den Ban (2000b) clarifies this new role by calling him 'counsellor'. We quite agree on this, though, for convenience, we will continue to use the term advisor[4]. These requirements represent one of the greatest challenges of the approach: how to find such advisors and how to train them?
MAFF also raises the question of the need for farmers' capacities in arithmetic and literacy. The ability to quantify and measure operations, inputs and outputs is an important element in the process of assessment, monitoring and evaluation of farm activities. However, one cannot assert that only literate farmers are able to master a management process[5]. Nevertheless, it is obvious that literacy makes it possible to go in for more accurate data registration, quantification, calculation, as well as more convincing comparisons of farm performances. Writing also strongly modifies modes of reasoning and representation. Studies should be conducted on the way illiterate people approach management and decision-making so that more appropriate tools could be elaborated and proposed to them.

[3] Management can be defined as the analysis and design of a steering system for the action organised.
[4] Originaly, the translation into english of 'conseil de gestion aux exploitations agricoles' was 'farm management group counselling' (Faure et al, 1996)
[5] The majority of farmers in francophone West Africa are still illiterate, others are either literate in a local language or schooled in French.

Methods and tools for initiating new dynamics

Useful tools for farmers

Management Advice of Family Farms involves the use of specific methods and tools that most importantly are diversified in order to respond to the variety of demand. Thus, we see the gradual development of tools for dealing with questions as diverse as crop or herd management, estimation of production costs, management of the family workforce and paid labour, self-sufficiency and food crop management, cash flow management, scheduling of investment, etc. The workshop showed a substantial range of tools used. Depending on the situation, the different approaches put emphasis either on technical and economic analyses, or experimentation with new technologies, or financial management and accountancy. The tools used (teaching materials, information sheets, farm logs, etc.) are aimed at changing farmers' perceptions, stimulating reflection, promoting the monitoring of activities and proposing scenarios for change. They are used for training and advice giving purposes and focus on indicators for decision-making which are meaningful for farmers, like gross margin per crop, the quantity of cereals per 'mouth to nourish', etc. One should avoid recording tedious and often useless data. In several cases tools are elaborated with strong farmers participation since the process of reasoning is more important than the calculated outcomes themselves[6].

The advisors and the farmers must have access to relevant information on improved practises, marketing opportunities, prices, local technical and commercial references, etc. Advisors should be trained in using specific tools for understanding the agrarian situation (zonation, typology, etc.). They should be enabled to follow refresher courses on methods used elsewhere, on new technologies and on institutional developments in agriculture. Such upstream information and training services could be delivered by a co-ordination centre run by the MAFF system itself, as well as by external sources, like research institutions, information systems, etc.

A dynamic training approach

According to the circumstances, tools have been developed for use in different approaches leading to different impacts. An almost similar sheet for technical and economic crop assessment could serve differently. It could either be filled in and analysed by the farmer with the help of the advisor, or be filled in by the farmer and analysed by the advisor, or be analysed by a data processing centre and returned to the farmer. We thus observe differences in approaches going from a process of training and capacity building of the farmer to an expertise delivery service by a data-processing centre and its advisors. The Bohicon workshop showed that beyond the tools, which can be quite similar, it is the implementation method that makes the difference between the experiments. These are based on different conceptions of advice delivery services needed by farmers.

[6] It is not rare to observe that calculations performed by the farmer are erroneous, but that the decision is a coherent result of his reasoning.

Box 2: Technical and-economic appraisal of maize production (Burkina Faso)
Example of a participant's case
First phase: Analysis of the results of the last cropping season after harvest

Village :Boho Kari		Farmer : Abdoulaye	Year : 2002
Crop: ……..maize		Production : 1340 kg	
Acreage : 0.5 ha		Yield : 2680 kg/ha	
Gross Margin Analysis			
My production	**Value FCFA**	**My expenditure**	**Value FCFA**
1340 kg X 30 F	40.200	NPK 1 bag X 5.500 Urea ¼ bag X 5.500 Herbicide 2 boxes X 3.635	5.500 1.375 7.270
Gross Product	40.200	**Total costs**	14.145
Gross Margin : 40.200 – 14.145 = 26.055 FCFA **Gross Margin per ha :** 26.055 / 0.5 = 52.110 FCFA			
Comments : delay in planting affected yield			

Comparison between different crops (cotton, maize, millet, sorghum, ..) for the same farmer by using the same sheet
½ day of work

Comparison between different farmers for the same crop through group analysis
½ day of work

Second phase: decisions intended for next cropping season

	My results of the season	**Village average**	**My decisions**		
			Increase	**Maintain**	**Decrease**
Area	0.5 ha	0.5 ha		X	
Yield	2680 kg/ha	3500 kg/ha	X		
Gross Margin	52.110 FCFA	83.000 FCFA	X		
Manure	0	2 t/ha	X		
NPK	100 kg/ha	150 kg /ha		X	
Urea	25 kg/ha	50 kg /ha		X	
Herbicide	4 boxes/ha	0			X
Weeding	2	2		X	
Comments : manure production depending on labor availability for transporting crop residues and manure ; depending on the available money for buying a weeding equipment					

The training aspect of MAFF finds its expression in the way the themes are introduced according to progressive time schedules. These take into account the needs expressed by participants and anticipate on the main events of the farming calendar. Approaches based on a long preliminary learning phase, presented as a course, should be avoided[7]. If necessary, such a phase should be short, using tools adequately designed for adults. On this point, the progressiveness of the MAFF procedure in time is a guarantee for quality.
In all experiments, exchanges between farmers are favoured first through joint analysis of farm performances, each participant in his turn. Second through common field visits, including demonstration and experiment plots, which enhance strong group dynamics. Farmers tend to believe what they see more than what they hear.

The aim is clearly to enable each farmer to assess his own situation, to specify his objectives and improve his decision-making. To achieve this most MAFF approaches rely strongly on group dynamics, which is supposed to facilitate maturation in the perception and representation of problems farmers are faced with. However, complementary, more individual advice is often needed as well, in particular on subjects requiring confidentiality and/or to solve specific questions (the choice of an investment, important changes in the farming system, etc.). This raises again the question of the qualifications an advisor should possess, as well as his cost. Should he be a good generalist, leaving specific problems to specialists? Who should pay for individual advice giving? The more advice giving becomes individual, the higher will be its cost.

Obviously, internal and external use of farm data should be submitted to the participating farmers themselves as sensitivity on this subject varies according to regions. In the majority of cases, exchange on technical and economic information between farmers is appreciated and strengthens their capacity to analyse their own situation. However, dissemination of precise information on farm income within groups may often be refused. When farmers' organisations participate in or govern the MAFF system themselves, information on aggregate data is often very useful to them. It facilitates negotiation of better prices or services for supply of inputs or marketing of products. In contrast, the use of data by other stakeholders, like banks, private companies, government agencies, etc., without the participants' approval, may seriously compromise the farmers' confidence in MAFF. That is why rules should be agreed upon for the use of farm data within the system and in communication with external stakeholders.

[7] In some experiments, initial training in concepts and use of tools lasts for more than a year.

Box 3 : Management Advice for Family Farms in Practice: the SOFITEX / UNPCB Experience (Burkina Faso)

Since 2000, both the cotton company (SOFITEX) and the cotton farmers' organization (UNPCB) decided to implement a MAFF approach to (i) stabilize the cotton production and improve its quality, (ii) strengthen the producers' capacities to manage their farms, (iii) improve food security and farmers incomes.
The cotton company provides the advisors, usually trained at the Faculty for Agriculture, with experience in on-farm experimentation or having received field training in farming systems' analysis, farm management and participatory approaches.
Management advice is provided first for literate farmers, who, voluntarily, join groups of 10 to 20 participants. Sessions are hold at regular intervals, every week or two weeks. The first groups are necessarily small. However, the farmer participants play an important role in the dissemination of information and technical innovations in their immediate neighborhood.
Special attention is paid in the first phase to the analysis of how farms operate. During the sessions held in a village meeting place, each participant fills in an individual farm log that will provide the basis of his farm assessment. The farm log is completed in Dioula and French and addresses questions concerning farm structure, the monitoring of crop and animal production, technical and economic assessment of cropping practices and analysis of the economic performance in terms of food security and cash flow. Thus different cases are chosen among the participants for illustrating a given sheet of the farm log. The cases are displayed on the black board and discussed by the group. Field visits in or outside the village, contribute much to broaden the scope of information These different appraisals induce to discussions on how to change practices in order to perform better. Next, development plans for farms are drawn up and introduction of new practices is envisaged.
Different tools are designed as the method advances (farm logs, technical sheets, management devices, guides for advisors, monitoring-evaluation sheets, etc.). Training is provided for advisors and technical staff of the cotton company, making use of specific training material.

The place of innovation in MAFF procedures

Innovation remains an important factor in the improvement of farm performance. The experiments analysed show that the importance attached to technical change varies from one experiment to another, mainly according to its origins. Some favour an approach linking technical and economic assessment with introduction of improved practises in order to respond to the concrete problems brought up by farmers. Others limit themselves only to economic or even financial and accountancy aspects. The former use farm experiments for training purposes and for building up local reference bases. Although the contribution of research institutes and development programmes is fully recognised, farmers' knowledge is usually the main source of information and, most importantly, the most credible one for producers. Use is thus made of endogenous innovations[8]. With this in mind, it would be useful to formalise procedures and propose specific tools based on farmers' experiments and the use of indigenous knowledge.

[8] E.g., a producers' organisation in northern Cameroon has set up an internal technical service for the promotion of transplanted sorghum, providing training for farmers, monitoring farmers' tests, etc.

Farmers as stakeholders in MAFF

MAFF embedded in social professional networks

MAFF deliberately places itself close to farming practises and requires that farmers' demand be truly taken into consideration, not just in word but in deed. The services delivered should be able to respond to the farmers' varied or even contradictory expectations. Well-equipped farmers, either with animal traction or tractors, do not have the same needs as manual farmers. In certain zones close to urban centres, especially in coastal countries like Benin and Ivory Coast, a trend towards farm enterprise development is observed. In savannah zones, the strength of social factors still affect the behaviour of farmers considerably. The approach design should clearly define the type of farmers which are targeted. Introduction of MAFF is a political choice, which requires preliminary discussion between the main stakeholders: farmers, FO's and the government. It supposes strong farmers' involvement in implementation and steering through Farmers' Organisations.

However, it appears that MAFF would better fit the needs of more innovative farmers who are better equipped, who are better trained and often dispose of more labour. Nevertheless, MAFF clientele is definitely composed of family farmers, with the exception of the rare entrepreneurs who benefit from individual advice (CAGEA, Benin). In some cases, participants are not head of their farm but 'deputy' or one of the main workers. In addition, only a few experiments are specifically aimed at women, who nevertheless often play an important economic role. The impact of MAFF on operating the farms should be examined, as in many societies exchange on farm practises between family members is not a common topic. In the case of experiments involving the FONGS[9] in Senegal, MAFF is thus focused on involving all family members and not only the heads of the farms.

Farmers participating in MAFF become members of socio-professional networks for exchange of knowledge and practises, which promote effective dissemination of information and innovations. Often these include locally recognised resource persons, regularly consulted by their pairs. Amongst them are leaders of professional organisations, members of the board of FO's / Unions, local agricultural banks, etc. Their participation in MAFF enables them to improve their capacities and often stimulates group dynamics. It also contributes to publicise the advantages of MAFF to a larger audience.
Actually, neither systematic information concerning the social position of MAFF participants, nor quantified data on impact beyond the group of participants, is available. A stimulating effect on the local economy is generally quoted, but little is known about its extent. Therefor, one of the recommendations of the workshop is to put more emphasis on impact studies.

[9] *Fédération des organisations Non Gouvernementales du Sénégal* (Senegalese Federation of NGO's)

Box 4: MAFF Impacts Beyond Participants : Empowerment of Farmers Organizations and Dissemination of Results

Mali (Office du Niger irrigation scheme - CPS / URDOC). Five Farmers' Service Centers (CPS), each of which assembling 20 to 30 "Village Associations", offer MAFF services to their members. The main activities of Village Associations concern delivery of credit on fertilizers, rice threshing and marketing. Entry is voluntary at all levels. Membership to MAFF groups is either individually or through the Village Association. Cost sharing fees are leveled individually. Farm Service Center managers (elected farmers) explain the MAFF service package to all their member organizations. The fact that farmers talk to farmers induces compelling interest among the community. Consequently, many opinion leaders join in. In 2002, 47 % of the participants are board members of Village Association, micro-finance organizations, elected members of the recently created rural townships, or are indigenous religious or social leaders. For some of them the new skills acquired at MAFF sessions serve them directly in their other duties (records keeping, planning, monitoring, dissemination of technical and economic information, etc.). They often talk informally about these subjects with their pairs. Consequently, social networks contribute much to disseminate lessons learnt with MAFF.

Benin (CAGEA, southern provinces). The chairman of a pineapple producers' organization as well as other members of the board are participating in MAFF. From lessons learnt, he organizes training sessions for members of his organization. A main theme is better scheduling pineapple plantation and floral induction to obtain a regular weekly supply. This enables contract farming with a tinning factory. MAFF being delivered in French, the chairman translated record sheets for planting planning and costs' assessment as well as technical information into his local language. He identified and trained some farmers responsible for giving support to other farmers belonging to the farmers organization He also elaborated a monitoring device for planting and delivery calendars, related with production cost watches.

Burkina Faso (cotton zone). The UPPM Farmers Organization engaged in MAFF delivery, uses farm management statistics derived from MAFF, to document their stands at meetings with government officials on issues of agricultural policy, like price setting mechanisms, production incentives, etc. The same strategy is applied at negotiations with the cotton company on the price of seed cotton paid to farmers in relation to real production costs. Based on assessments carried out by farmers, the farmers organization organizes debates with different membership village associations on rural development issues, as cotton production compared to maize and vegetables production, income trends, risk reduction related to seed cotton price fluctuations, control of social expenditures on funerals and weddings, etc.

The importance of farmers' governance

Supervision and management of delivery services

The institutional set-up of the system is not at all neutral with regard to the targeting of advice services. Strategic options are chosen differently according to the stakeholders in charge of

the system, and consequently the position of farmers amongst them. These options concern first the choice of themes, e.g. putting more or less emphasis on a single commodity, or taking into account all the farmers' occupations, including family needs. Second, there is difference in the choice of tools, e.g. between those used for technical and economic assessment of practises and those used for accountancy. Third, the degree of farmers' participation and knowledge mobilisation in the method applied may differ considerably.

Four types of institutional systems are observed:

- systems managed by a farmers' organisation (UPPM, Burkina Faso)
- systems managed by an inter-professional body (cotton zones in Mali and Burkina Faso)
- service delivery centres specialised in MAFF and managed by the participating farmers (CPS in Mali),
- private providers of services giving advice to individual farmers or advice within the framework of contract agreements with FO's and projects (CAGEA, CADG in Benin).

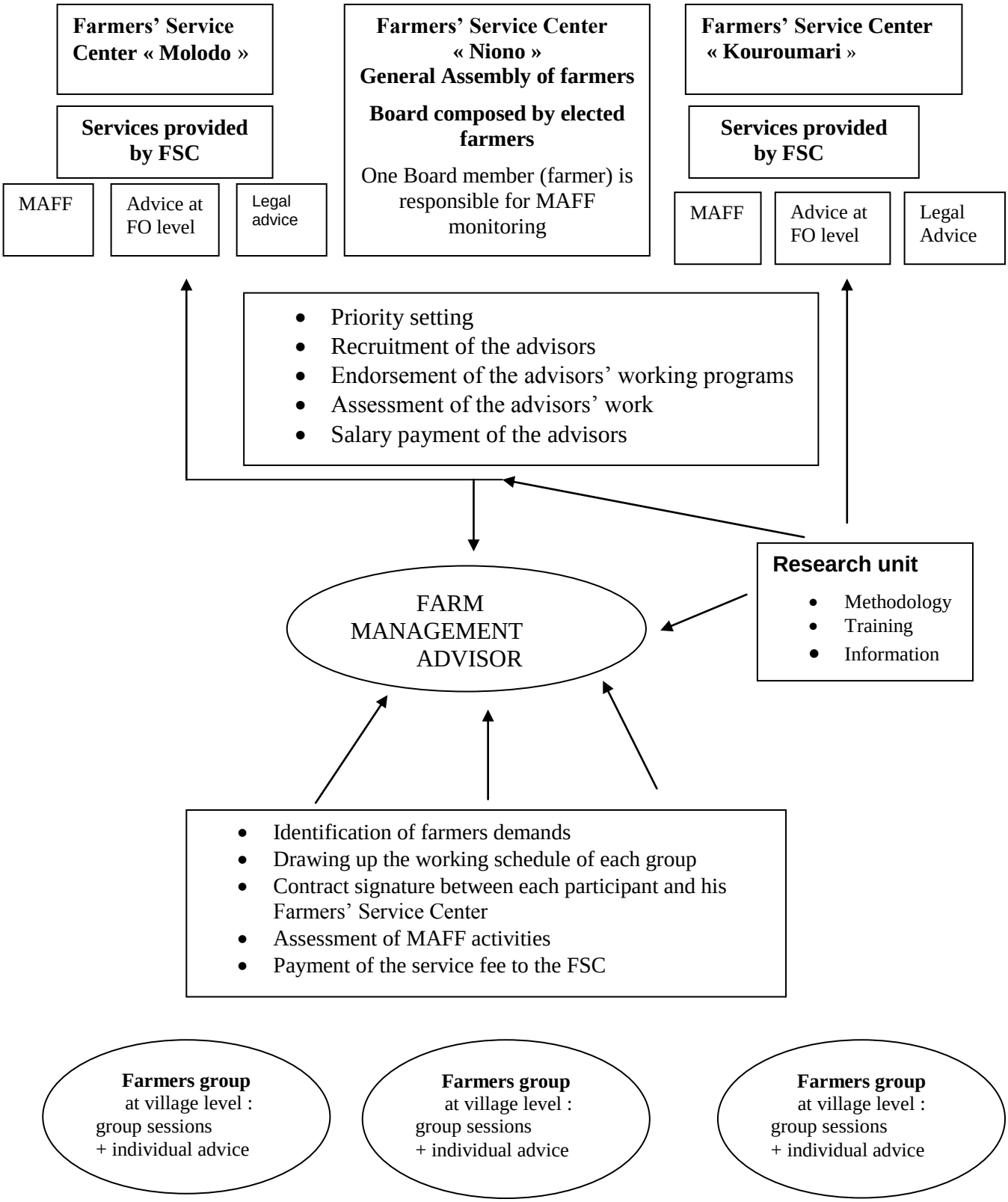
The participation of farmers and their organisations is essential for identifying and responding to the varied needs of farmers, to ensure their support for the method, to strengthen their autonomy and to increase their responsibility. However, sometimes farmers' participation could be used as an 'alibi', while real decisions are taken elsewhere. Sound procedures should be formulated enabling farmers to set the agenda and to evaluate the achievements at the following levels:

- farmers groups participating in MAFF, need assessment, priority setting locally, and programming, guidance and evaluation of the advisor,
- zone co-ordination , steering the advisors' programs by involving MAFF participants and representatives of FO's,
- global co-ordination, FO's officials have to set general orientations and handle the scheduling, monitoring and assessment of MAFF.

Personnel management of advisors

Farmers' involvement in steering the system implicates that they also monitor the recruitment of advisors. Farmers' leaders clearly express their preference for advisors with intermediate qualifications, above academics, in order to reduce the risk of creating too great a gap between them and the rural communities. They prefer persons close to their local culture, having farming experience themselves, speaking the local language. In some cases, cost sharing of advice services delivered by advisors contracted by FO's is tested, particularly in Mali (Office du Niger) and Burkina Faso (UPPM). Support and training facilities for advisors are essential for strengthened their capacity, assure information flows and sustain motivation. The participation of farmers in the scheduling, monitoring and assessment of the work of advisors must be specified in a detailed manner and requires the development of specific methods and tools (Hémidy and Cerf, 2000).

Box 5: Participation of the Farmers and Farmers Organizations in the Management of Delivery Services, the Case of the Farmers' Services Centers in the Office du Niger Irrigation area, Mali



Financial management and cost sharing

MAFF experiments are still substantially supported by external aid. The fees paid by members and FO's represent about 5 to 10% of the costs of the system. In exceptional cases, they cover half of the expenditure. Governments only intervene in rare cases by providing personnel (APROCASUDE, Ivory Coast). In Mali, the role of public sector in advisory services and training is currently in question. Just started World Bank financing is to be used at the request of FO's for advice services delivered by private providers.
Cost sharing by farmers is important to mark their commitment and to prepare their increasing involvement in governing the system. The amount of their contribution should necessarily be compatible with their means and will doubtless remain modest in comparison with the total cost of the service. Coverage of the cost can vary according to the type of farms concerned and the type of advises provided. The 'training' component of advice is often important and justifies significant external support as payment for a public good. In contrast, a higher fee can be charged for more individual consultancy services (drafting of a loan application, a farm development plan, etc.).
However, farmers must be able to participate in decision-making on major issues concerning financing of the system (choice of support and training providers, functioning of advisors, etc.). A private stakeholder can implement public funding for a public service. Depending on the case, funds can be made available through private operators or FO's (van den Ban, 2000a).

The need for an agricultural policy favourable for family farming

MAFF can become a driving force in agricultural development, on condition it is recognised by the ruling institutions, it is embedded in the rural communities and is governed by farmers. The vocation of MAFF is not to replace conventional agricultural extension. There will always be need for general dissemination of information on essential subjects (new inputs, major crop and livestock technologies, market opportunities, etc.), addressing large groups of farmers. MAFF is complementary to existing agricultural training facilities. It efficiency is improved when linked with adult literacy programmes, reinforcing the latter by providing practical applications and training components. It contributes to capacity building for farmers' organisations and for their leaders.
Sustainable support for MAFF requires that new ways of financing could be mobilised coming from different sources (farmers, farmers' organisations, para-statal or private companies, public finance and development aid). Contributions are justified by the interest each stakeholder has, in promoting a strong farming economy. Public finance could be allocated for the improvement of methods, adult literacy campaigns, the training of advisors and the cost of applied research.
However, it is not a cure-all or a miracle solution. In order to expand, MAFF requires a secure economic and institutional environment and regional and national policies that are favourable for family farms[10]. These should include investment in rural areas (education, literacy, infrastructure, etc.), appropriate access to agricultural finance and credit, proper regulation of

[10] see, in particular, the proposals of the ROPPA to the heads of African states in Dakar in December 2001.

marketing for agricultural products, etc. The instability of numerous agricultural export commodity markets is often mentioned (strong price fluctuations for cotton, coffee, cocoa, etc.) as being the cause of economic instability, making the forward-looking management of farms difficult. The long term sustainability of MAFF experiments cannot therefore be envisaged without a minimum of stability combined with public support (national and international), made legitimate by the important contribution MAFF could forward in fighting against poverty and increasing the competitiveness of African family farming.

References

BENOR B., HARRISON J.Q., BAXTER M., 1984. Agricultural extension: the training and visit system, Washington, World Bank, 85 pp.

CHOMBART D.L., POITEVIN J., TIREL J.C., 1969. Nouvelle gestion des exploitations agricoles, 2ème Ed, Paris, Dunod, 507 pp.

CIRAD, IRAM, Inter-Réseaux (forthcoming). Actes de l'atelier de capitalisation des expériences de conseil aux exploitations familiales. Bohicon du 19 au 23 novembre 2001. (ed. DUGUE P., FAURE G.)

CIRAD, 2000. Références technico-économiques et conseil de gestion aux exploitations agricoles. Actes de l'atelier du 1er septembre 1999, Dugué P. (Ed), Montpellier, France, 163p.

FAURE G., KLEENE P., OUEDRAOGO S. and RAYMOND G, 1996. Using farm management group counselling (FMGC) to improve agricultural extension efficiency in Burkina Faso. Case study for the Extension Workshop, alternative mechanisms for funding and delivering extension, 18-19 June 1996, World Bank, Washington DC.

FAURE G., KLEENE P., OUEDRAOGO S., 1998. Le conseil de gestion aux agriculteurs dans la zone cotonnière du Burkina Faso : une approche renouvelée de la vulgarisation agricole. Etudes et Recherches sur les Systèmes Agraires et le Développement. INRA. No 31. pp 81-92.

GASTELLU J.M., DUBOIS J.L., 1997. En économie: l'unité retrouvée, la théorie revisitée, Les études du CEPED, No 15, pp 75-97.

HATCHUEL, A., 2000. Quels horizons pour les sciences de gestion ? Vers une théorie de l'action collective. *In* Les nouvelles fondations des sciences de gestion, David A., Hatchuel A. Laufer R. (ed.). Paris, France, FNGE, p. 7-44.

HEMIDY L., BOITEUX J. CARTE H., 1996. Aide à la décision et accompagnement stratégique: l'expérience du CDER de la Marne. *In* Actes du colloque "Aide à la décision et choix stratégiques dans les entreprises agricole'". Laon. 10 et 11 décembre 1996. pp. 33-52.

HEMIDY L., CERF M., 2000. Managing Change in Advisory Services: Controlling the Dynamics of Resource Transformation and Use. *In* Cow up a tree, Knowing and Learning for Change in Agriculture, Case Studies from Industrialised Countries, Cerf M. et al. (ed), Paris, France, INRA, pp 351-368

INTERAFOCG, 2002. Se former pour gérer, Dossier INTERAFOCG, Paris, 42 p.

INTER-RESEAUX, 1996. Conseil en gestion pour les exploitations agricoles d'Afrique et d'Amérique Latine, Dossiers de l'Inter-Réseaux, 62 p.

RÖLING N., 1988. Extension science, information systems in agricultural development, Cambridge University Press, 233 p.

SCHWARTZ, L. A., 1994. The role of the private sector in agricultural extension: economic analyses and case studies. Agricultural Administration (Research and Extension) Network paper N° 48, ODI, London, 54p.

Van den BAN, A.,W., 2000a. Different ways of financing agricultural extension. AgREN Network Paper N° 106b, ODI, London, p. 8-19.

Van den BAN, A.,W., 2000b. Changing farming systems to realise new opportunities in the markets. *In* New vista in rural development, R.K. Samanta. New Dehli: B.R. Publishing.